

CLAIMS

1. An apparatus for analyzing the concentration of a component in a body fluid sample, said apparatus comprising a housing configured to receive a disposable diagnostic reagent unit which exhibits a color change upon sensing said component in the body fluid sample, said apparatus further comprising:

- a. a light source and light sensor for measuring light emanating from said source and reflected by reagent chemistry in said unit and having an optical characteristic proportional to the component of a liquid to be measured after transporting said liquid to said reagent; whereby an electrical signal responsive to a change in said reagent chemistry is generated, and therefore also to the component to be measured;;
- b. a microprocessor for processing said generated electrical signal; and
- c. a display responsive to said processed signal for providing a visual readout representative of the analysis on said;

wherein said disposable diagnostic reagent unit comprises said reagent chemistry to detect a vitamin K marker in said body fluid sample.

2. A method of determining the proper dosage for an anticoagulant comprising the steps of measuring the vitamin K nutritional status of a patient; and modulating the dosage of an anticoagulant based on the patient's Vitamin K nutritional status.

3. The method of claim 2, wherein modulation of anticoagulation dosages comprises increasing dosages, decreasing dosages or maintaining dosages based on the expected effect of certain nutritional values for vitamin K in the patient, as well as a patient's diet patterns.

4. An apparatus analyzing the concentration of a component of a body fluid sample, said apparatus comprising a housing configured to receive a disposable diagnostic reagent unit which produces a signal upon detecting said component in the liquid, said apparatus further comprising:

- a. electromechanical and software components for receiving and processing said signal from said disposable diagnostic reagent unit; and
- b. a display responsive to said processed signal for providing a visual readout representative of the analysis on said;

wherein said disposable diagnostic reagent unit comprises said reagent chemistry to detect a vitamin K marker in said body fluid sample.

5. The apparatus of claim 4, wherein said electromechanical components comprise a microprocessor.
6. The apparatus of claim 4, wherein said signal produced by said disposable diagnostic reagent unit is an electrical signal produced by electrochemically detecting said component in said body fluid sample.
7. The apparatus of claim 6, wherein said electrochemically detecting comprises sensing changes in voltage produced by the reagent chemistry and interaction with said component in said body fluid sample.
8. A diagnostic reagent unit for analyzing a liquid sample suspected of containinig a Vitamin K marker, said device comprising the following components:
 - (1) a liquid sample application member;
 - (2) a liquid sample receiver; said receiver comprising a mobilizable labeled specific binding reagent for binding to analyte in said sample; and
 - (3) a dry porous carrier strip downstream of said liquid sample receiver, said carrier strip including a detection zone comprising an unlabeled immobilized specific binding reagent for binding to said analyte, said mobilizable labeled reagent being freely soluble or dispersible in liquid sample and transported by said liquid sample from said liquid receiver to detection zone;
wherein said analyte is a Vitamin K marker.
9. The diagnostic reagent unit of claim 8, wherein said Vitamin K marker is carboxylated osteocalcin.
10. The diagnostic reagent unit of claim 8, wherein said mobilizable labeled specific binding reagent is a labeled anti-carboxylated osteocalcin antibody.
11. The diagnostic reagent unit of claim 8, wherein said immobilized specific binding reagent is an anti-carboxylated osteocalcin antibody.
12. The diagnostic reagent unit of claim 8, wherein the presence of vitamin K marker produces a detectable signal corresponding to the concentration of the vitamin K marker.